

## Dr. Nano Wai-Yin CHENG, PhD

### Academic qualifications:

2019 – 2022	PhD in Neuroscience	School of Biomedical Sciences, Faculty of Medicine, The University of Hong Kong
2017 – 2019	MPhil in Food and Nutritional Sciences	School of Life Sciences, The Chinese University of Hong Kong
2013 – 2017	BSc (Hons) in Food Safety and Technology (1st class Hon)	Department of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University

### Positions and Employment:

2023-present	Research Assistant Professor, Department of Food Science and Nutrition, The Hong Kong Polytechnic University
2022-2023	Postdoctoral researcher, KU Leuven

### Grant records:

1. General Research Fund, Research Grants Council (RGC) of Hong Kong, Investigating the roles of the circadian clock gene, *Bmall*, on systemic inflammation-triggered neuroinflammation and cognitive dysfunctions, HKD 1,167,111, 1/1/2025 – 31/12/2027, As Principal Investigator
2. Start-up Fund (Strategic Hiring), PolyU (UGC), Study the therapeutic use of prebiotics on circadian desynchrony, HKD 250,000, 2023-08 – 2025-06, As Principal Investigator
3. Donation, Development of mushroom-based products, HKD 100,000, 2024-03 – 2025-02, As Principal Investigator

### Research-related Awards and Service

2024	Grant Reviewer, United States-Israel Binational Science Foundation
2024	Invited Speaker, World DNA Day 2024
2023	Young Investigator Award for Poster Presentation, 17 <sup>th</sup> International Symposium on Healthy Aging
2023 till now	Young GI Associate, United European Gastroenterology
2023 till now	Registered European Commission Expert
2021 till now	Reviewer for different SCI journals: Journal of Neuroinflammation, Journal of Advanced Research, International Journal of Biological Macromolecules and The Journal of Nutritional Biochemistry

## **Publications:**

1. **Cheng, W.Y.\***, Lee, X.Z., Lai, M.S.L., Ho, Y.S. and Chang, R.C.C. (2025). PKR Modulates Sterile Systemic Inflammation-Triggered Neuroinflammation and Brain Glucose Metabolism Disturbance. *Frontiers in Immunology*, 16, 1469737 (Impact factor: 5.7, Q1)
2. Zhu, Y. Y., Dong, Y. H., Gu, F. T., Zhao, Z. C., Huang, L. X., **Cheng, W. Y.\***, & Wu, J. Y. (2024). Anti-Inflammatory Effects of Cordyceps Cs-HK1 Fungus Exopolysaccharide on Lipopolysaccharide-Stimulated Macrophages via the TLR4/MyD88/NF- $\kappa$ B Pathway. *Nutrients*, 16(22), 3885. (Impact factor: 4.8, Q1)
3. **Cheng, W.Y.\***, Chan, P.L., Ong, H.Y., Wong, K.H., & Chang, R. C. C. (2024). Systemic Inflammation Disrupts Circadian Rhythms and Diurnal Neuroimmune Dynamics. *International Journal of Molecular Sciences*, 25(13). (Impact factor: 5.6, Q1)
4. Ho, Y. S., **Cheng, W. Y.**, Lai, M. S. L., Lau, C. F., Wong, G. T. C., Yeung, W. F., & Chang, R. C. C. (2024). Postoperative Electroacupuncture Boosts Cognitive Function Recovery after Laparotomy in Mice. *Biomolecules*, 14(10), 1274. (Impact factor: 4.8, Q1)
5. Wu, Y., Meng, X., **Cheng, W. Y.**, Yan, Z., Li, K., Wang, J., Jiang, T., Zhou, F., Wong, K. H., Zhong, C., Dong, Y., & Gao, S. (2024). Can pluripotent/multipotent stem cells reverse Parkinson's disease progression? *Frontiers in Neuroscience*, 18, 1210447. (Impact factor: 3.2, Q2)
6. Cheung, K., Chan, V., Chan, S., Wong, M. M. H., Chung, G. K. K., **Cheng, W. Y.**, Lo, K. & Zeng, F. (2024). Effect of intermittent fasting on cardiometabolic health in the Chinese population: a meta-analysis of randomized controlled trials. *Nutrients*, 16(3), 357. (Impact factor: 4.8, Q1)
7. **Cheng, W.Y.**, Desmet, L., & Depoortere, I. (2023). Time-restricted eating for chronodisruption-related chronic diseases. *Acta Physiologica*, 239(2), e14027. (Impact factor: 6.3, Q1)
8. **Cheng, W. Y.**, Ho, Y. S., & Chang, R. C. C. (2022). Linking circadian rhythms to microbiome-gut-brain axis in aging-associated neurodegenerative diseases. *Ageing Research Reviews*, 78, 101620. (Impact factor: 11.788, Q1)
9. Wong, W. K., Lai, C. H. N., **Cheng, W. Y.**, Tung, L. H., Chang, R. C. C., & Leung, F. K. C. (2022). Polymer–Metal Composite Healthcare Materials: From Nano to Device Scale. *Journal of Composites Science*, 6(8), 218. (Impact score: 3.486, Q2)
10. **Cheng, W. Y.**, Lam, K. L., Li, X., Kong, A. P. S., & Cheung, P. C. K. (2021). Circadian disruption-induced metabolic syndrome in mice is ameliorated by oat  $\beta$ -glucan mediated by gut microbiota. *Carbohydrate Polymers*, 267, 118216. (Impact factor: 10.723, Q1)
11. **Cheng, W. Y.**, Lam, K. L., Kong, A. P. S., & Cheung, P. C. K. (2020). Prebiotic supplementation (beta-glucan and inulin) attenuates circadian misalignment induced by shifted light-dark cycle in mice by modulating circadian gene expression. *Food Research International*, 137, 109437. (Impact factor: 7.425, Q1)

12. Lam, K. L., **Cheng, W. Y.**, Su, Y., Li, X., Wu, X., Wong, K. H., ... & Cheung, P. C. K. (2020). Use of random forest analysis to quantify the importance of the structural characteristics of beta-glucans for prebiotic development. *Food Hydrocolloids*, 108, 106001. (Impact factor: 11.504, Q1)
13. Lam, K. L., **Cheng, W. Y.**, Yang, F., Lin, S., You, L., Chiou, J., ... & Cheung, P. C. K. (2020). Framework as a Service, FaaS: Personalized Prebiotic Development for Infants with the Elements of Time and Parametric Modelling of In Vitro Fermentation. *Microorganisms*, 8(5), 623. (Impact factor: 4.926, Q2)
14. Lam, K. L., Ko, K. C., Li, X., Ke, X., **Cheng, W. Y.**, Chen, T., ... & Cheung, P. C. K. (2019). In Vitro Infant Faecal Fermentation of Low Viscosity Barley  $\beta$ -Glucan and Its Acid Hydrolyzed Derivatives: Evaluation of Their Potential as Novel Prebiotics. *Molecules*, 24(5), 828. (Impact factor: 4.927, Q2)
15. **Cheng, W. Y.**, Wei, X. Q., Siu, K. C., Song, A. X., & Wu, J. Y. (2018). Cosmetic and Skincare Benefits of Cultivated Mycelia from the Chinese Caterpillar Mushroom, *Ophiocordyceps sinensis* (Ascomycetes). *International journal of medicinal mushrooms*, 20(7), 623-636. (Research article based on final year project; Impact factor: 1.921, Q3)
16. Li, X., Zhou, J., Dong, X., **Cheng, W. Y.**, Duan, H., & Cheung, P. C. K. (2018). In Vitro and In Vivo Photothermal Cancer Therapeutic Effects of Gold Nanorods Modified with Mushroom  $\beta$ -Glucan. *Journal of agricultural and food chemistry*, 66(16), 4091-4098. (Impact factor: 5.895, Q1)